

REMARKS/ARGUMENTS

Claims 1-3, 5-9, 13, 14, 17, 19, and 20 are pending in the present application, of which claims 1, 6, 13, and 17 are independent. Claims 1, 3, 5-9, 13, 14, 17, 19, and 20 are amended. Claims 4, 10, 11, 12, 15, 16, 18, 21, and 22 are canceled without prejudice or disclaimer of their subject matter. No new matter is added.

REJECTIONS UNDER 35 U.S.C. § 103(a)

On pages 3-7, the Office Action rejects claims 1-3 under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent Application 2003/0110268 to Kermarec et al. (hereinafter “Kermarec”) in view of U.S. Patent No. 7,113,512 to Holmgren et al. (hereinafter “Holmgren”), and further in view of U.S. Patent No. 6,967,954 to Sugiyama et al (hereinafter “Sugiyama”). On pages 7-10, the Office Action rejects claim 4 under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 6,041,057 to Stone et al. (hereinafter “Stone”) in view of U.S. Patent Application 2002/0101870 to Chase (hereinafter “Chase”), and further in view of Sugiyama. On pages 10-12, the Office Action rejects claim 5 under 35 U.S.C. § 103(a) as allegedly unpatentable over Stone in view of Chase, further in view of Sugiyama, and still further in view of U.S. Patent Application 2002/00231 to Frelechoux et al. (hereinafter “Frelechoux”). On pages 13-17, the Office Action rejects claims 6 and 7 under 35 U.S.C. § 103(a) as allegedly unpatentable over Kermarec in view of

Holmgren, further in view of Frelechoux, and still further in view of Sugiyama. On pages 18-19, the Office Action rejects claims 8 and 9 under 35 U.S.C. § 103(a) as allegedly unpatentable over Kermarec in view of Holmgren, further in view of Frelechoux, further in view of Sugiyama, and still further in view of U.S. Patent No. 6,456,600 to Rochberger (hereinafter "Rochberger"). On pages 19-26, the Office Action rejects claims 10 and 11 under 35 U.S.C. § 103(a) as allegedly unpatentable over Nair in view of Frelechoux, further in view of Stone, and still further in view of Sugiyama. On pages 26-29, the Office Action rejects claim 12 under 35 U.S.C. § 103(a) as allegedly unpatentable over Nair in view of Sugiyama. On pages 29-34, the Office Action rejects claims 13 and 14 under 35 U.S.C. § 103(a) as allegedly unpatentable over Kermarec in view of Holmgren, further in view of U.S. Patent No. 7,292,577 to Ginipalli et al. (hereinafter "Ginipalli"), and still further in view of Sugiyama. On pages 34-41, the Office Action rejects claims 15 and 16 under 35 U.S.C. § 103(a) as allegedly unpatentable over Kermarec in view of Holmgren, further in view of Stone, further in view of Frelechoux, and still further in view of Sugiyama. On pages 41-49, the Office Action rejects claims 17-20 under 35 U.S.C. § 103(a) as allegedly unpatentable over Holmgren in view of Stone, further in view of Kermarec, further in view of Frelechoux, and still further in view of Sugiyama. On pages 49-57, the Office Action rejects claims 21 and 22 under 35 U.S.C. § 103(a) as allegedly unpatentable over Holmgren in view of Stone, further in view of

Kermarec, further in view of Frelechoux, and still further in view of Sugiyama. Applicant respectfully traverses all of these rejections.

Independent claim 1 recites “generating a PNNI Topology State Element (PTSE) including a VPLS Information Group (IG)” (emphasis added). Independent claims 6, 13, and 17 contain similar recitations. Support in the specification for the subject matter added to claims 1 can be found in, for example, paragraph [0005]. The VPLS IG indicates both the VPLS ID and the ATM address associated with the VPLS. As further disclosed in paragraph [0009], the claimed subject matter allows an operator of an ATM network to emulate VPLS without having to manually configure virtual circuits between each pair of PEs.

On page 3, the Office Action alleges that Kermarec discloses a method of emulating VPLS. However, Applicant respectfully submits that Kermarec, alone or in combination, fails to disclose, suggest, or teach a VPLS Information Group. While Kermarec may provide a virtual private network (VPN), Kermarec does not provide either a VPLS ID or an associated ATM address.

Independent claim 1, further recites, in part, the following subject matter: “establishing a mesh of virtual circuits to emulate VPLS by attaching virtual circuits to pairs of PEs, each of the pairs of PEs in the mesh comprising a first PE and a second PE” (emphasis added). Independent claims 6, 13, and 17 contain similar recitations. This subject matter finds support in the specification, for

example, in paragraph [0032]. Similar subject matter now appears in the other independent claims. Such emulation of VPLS involves the creation of local and remote private bridges, where provisioning of a full mesh of ATM virtual circuits between the private and remote bridges permits full emulation. After full establishment of the mesh, the end customer could be completely unaware of VPLS being offered over the ATM core network.

On pages 3 and 4, the Office Action alleges that Kermarec establishes virtual circuits between PEs, citing paragraphs [0019] and [0025] of Kermarec. While paragraph [0019] of Kermarec does disclose “a virtual circuit between said first and second PE devices,” Kermarec does not disclose a mesh of virtual circuits. Moreover, paragraph [0025] of Kermarec describes establishment of per VLAN-ID virtual circuits between PE devices. Applicant respectfully submits that such establishment differs from the claimed mesh and would not permit full emulation.

As further disclosed in paragraph [0004], service providers cannot currently emulate VPLS over existing ATM networks due to the inability to automatically establish a mesh of connections between PEs to provide both local and remote bridging for the VPLS. The conventional solution involved addition of an MPLS signaling protocol, a solution that was both costly and operationally challenging. In contrast, the recited subject matter describes how pairs of PEs are automatically grouped into a mesh, thereby providing full VPLS-like services on the network.

Chase, Frelechoux, Ginipalli, Holmgren, Kermarec, Nair, Rochberger, Stone, Sugiyama fail to disclose, suggest, or teach this subject matter. The references of record do not use a mesh of virtual circuits in the claimed manner for VPLS emulation. Accordingly, Applicant respectfully asserts that independent claims 1, 6, 13, and 17 are allowable.

Claims 2, 3, and 5 depend from allowable claim 1, claims 7-9 depend from allowable claim 6, claim 14 depends from allowable claim 13, and claims 19 and 20 depend from allowable claim 17. Thus, Applicant respectfully submits that claims 2, 3, 5, 7-9, 14, 19, and 20 are allowable at least by virtue of their respective dependencies upon allowable independent claims. Claims 4, 10, 11, 12, 15, 16, 18, 21, and 22 are canceled without prejudice or disclaimer of their subject matter. Accordingly, Applicant respectfully requests that the rejections of claims 1-22 under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

While we believe that the instant amendment places the application in condition for allowance, should the Examiner have any further comments or suggestions, it is respectfully requested that the Examiner telephone the undersigned attorney in order to expeditiously resolve any outstanding issues.

In the event that the fees submitted prove to be insufficient in connection with the filing of this paper, please charge our Deposit Account Number 50-0578 and please credit any excess fees to such Deposit Account.

Respectfully submitted,
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